WHAT IS CLAIMED IS:

1. A process for the production of a two-component coating mixture having the following steps:
mixing of a first coating component and a second coating component in a mixer to yield the two-component coating mixture, and
homogenizing the two-component coating mixture using a homogeniser, wherein at least a portion of the two-component coating mixture is homogenised repeatedly in succession in the homogeniser.

2. The process according to Claim 1, wherein the two coating components are supplied to the mixer separately from one another at a pressure of at most 2.5 MPa.

3. The process according to Claim 1, wherein a portion of the two-component coating mixture from an outlet of the homogeniser is recirculated to an inlet of the homogeniser.

4. The process according to Claim 1, wherein a first coating component is an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms, and a second coating component contains polyisocyanate.

5. The process according to Claim 1, wherein, between the mixer and the homogeniser , the two-component coating mixture exhibits a mass flow rate of from 50 g/minute to 3000 g/minute.

6. The process according to Claim 1, wherein the homogeniser is a jet disperser.

7. The process according to Claim 1, wherein
a first coating component is supplied to the mixer by a first pump, and/or
a second coating component is supplied to the mixer by a second pump, and/or
the two-component coating mixture is delivered by a third pump from the mixer to the homogeniser.

8. The process according to Claim 7, wherein the third pump is operated at a higher delivery capacity than the first pump and the second pump together.

9. The process according to Claim 7, wherein at least one of the first pump, the second pump and the third pump is a gear pump.

10. An apparatus for the production of a two-component coating mixture, comprising
a mixer for the production of the two-component coating mixture capable of mixing a first coating component and a second coating component, and
a homogeniser capable of homogenizing the two-component coating mixture, the homogeniser being arranged downstream from the mixer,
wherein
a return line, which branches off in an output zone of the homogeniser and opens into an input zone of the homogeniser, in order to recirculate a portion of the two-component coating mixture homogenised by the homogeniser for rehomogenisation.

11. The apparatus according to Claim 10, wherein
a first pump for delivering the first coating component, the first pump being connected via a first feed line with the mixer, and
a second pump for delivering the second coating component, the second pump being connected via a second feed line with the mixer, and
a third pump for delivering the two-component coating mixture, the third pump being arranged between the mixer and the homogeniser.

12. The apparatus according to Claim 11, wherein the third pump has a greater delivery capacity than the first pump and/or the second pump.

13. The apparatus according to Claim 11, wherein the first pump and/or the second pump and/or the third pump has a delivery pressure which amounts to at most 2.5 MPa.

14. The apparatus according to Claim 11, wherein the first pump and/or the second pump and/or the third pump is a gear pump.

15. The apparatus according to Claim 11, wherein a filter is arranged in the first feed line and/or in the second feed line and/or in the third feed line upstream from the mixer.

16. The apparatus according to Claim 10, wherein the homogeniser is a jet disperser.

17. The apparatus according to Claim 10, wherein the first coating component is an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms, and the second coating component contains polyisocyanate.

18. The apparatus according to Claim 11, wherein the return line opens into a zone between the mixer and the third pump.

19. The apparatus according to Claim 10, wherein the mixer and/or the homogeniser comprises a rinsing agent connection.

20. The apparatus according to Claim 10, wherein the mixer comprises a controllable valve which controls a feed stream of the first coating component and/or a feed stream of the second coating component and/or a discharge of the two-component coating mixture.

21. The apparatus according to Claim 10, wherein at least one bypass line is provided in order to bypass the mixer and/or the homogeniser during rinsing operation.

22. The apparatus according to Claim 21, wherein a controllable valve is arranged in the bypass line.

23. A substrate coated with a coating layer comprising the two-component coating mixture provided by the process according to Claim 1.

24. The process according to Claim 1, wherein the two-component coating mixture includes an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms and a polyisocyanate and forms an aqueous polyurethane coating emulsion.

25. The process according to Claim 2, wherein a portion of the two-component coating mixture from an outlet of the homogeniser is recirculated to an inlet of the homogeniser.

26. The process according to Claim 8, wherein at least one of the first pump, the second pump and the third pump is a gear pump.

27. The apparatus according to Claim 10, wherein the two-component coating mixture includes an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms and a polyisocyanate, and forms an aqueous two-component polyurethane coating emulsion.

28. The apparatus according to Claim 12, wherein the first pump and/or the second pump and/or the third pump has a delivery pressure which amounts to at most 2.5 MPa.

29. The apparatus according to Claim 12, wherein the first pump and/or the second pump and/or the third pump is a gear pump.

30. The apparatus according to Claim 13, wherein the first pump and/or the second pump and/or the third pump is a gear pump.

31. The apparatus according to Claim 28, wherein the first pump and/or the second pump and/or the third pump is a gear pump.

32. The apparatus according to Claim 12, wherein a filter is arranged in the first feed line and/or in the second feed line and/or in the third feed line upstream from the mixer.

33. The apparatus according to Claim 13, wherein a filter is arranged in the first feed line and/or in the second feed line and/or in the third feed line upstream from the mixer.

34. The apparatus according to Claim 14, wherein a filter is arranged in the first feed line and/or in the second feed line and/or in the third feed line upstream from the mixer.

35. The apparatus according to Claim 11, wherein the homogeniser is a jet disperser.

36. The apparatus according to Claim 12, wherein the homogeniser is a jet disperser.

37. The apparatus according to Claim 13, wherein the homogeniser is a jet disperser.

38. The apparatus according to Claim 14, wherein the homogeniser is a jet disperser.

39. The apparatus according to Claim 15, wherein the homogeniser is a jet disperser.

40. The apparatus according to Claim 11, wherein the first coating component is an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms, and the second coating component contains polyisocyanate.

41. The apparatus according to Claim 12, wherein the first coating component is an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms, and the second coating component contains polyisocyanate.

42. The apparatus according to Claim 13, wherein the first coating component is an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms, and the second coating component contains polyisocyanate.

43. The apparatus according to Claim 14, wherein the first coating component is an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms, and the second coating component contains polyisocyanate.

44. The apparatus according to Claim 15, wherein the first coating component is an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms, and the second coating component contains polyisocyanate.

45. The apparatus according to Claim 16, wherein the first coating component is an aqueous binder dispersion comprising isocyanate-reactive hydrogen atoms, and the second coating component contains polyisocyanate.

46. The apparatus according to Claim 12, wherein the return line opens into a zone between the mixer and the third pump.

47. The apparatus according to Claim 13, wherein the return line opens into a zone between the mixer and the third pump.

48. The apparatus according to Claim 14, wherein the return line opens into a zone between the mixer and the third pump.

49. The apparatus according to Claim 15, wherein the return line opens into a zone between the mixer and the third pump.

50. The apparatus according to Claim 16, wherein the return line opens into a zone between the mixer and the third pump.

51. The apparatus according to Claim 17, wherein the return line opens into a zone between the mixer and the third pump.

52. The apparatus according to Claim 11, wherein the mixer and/or the homogeniser comprises a rinsing agent connection.

53. The apparatus according to Claim 12, wherein the mixer and/or the homogeniser comprises a rinsing agent connection.

54. The apparatus according to Claim 13, wherein the mixer and/or the homogeniser comprises a rinsing agent connection.

55. The apparatus according to Claim 14, wherein the mixer and/or the homogeniser comprises a rinsing agent connection.

56. The apparatus according to Claim 15, wherein the mixer and/or the homogeniser comprises a rinsing agent connection.

57. The apparatus according to Claim 16, wherein the mixer and/or the homogeniser comprises a rinsing agent connection.

58. The apparatus according to Claim 17, wherein the mixer and/or the homogeniser comprises a rinsing agent connection.

59. The apparatus according to Claim 18, wherein the mixer and/or the homogeniser comprises a rinsing agent connection.

60. A substrate coated with a coating layer comprising the two-component coating mixture provided by the process according to Claim 2.

61. A substrate coated with a coating layer comprising the two-component coating mixture provided by the process according to Claim 3.

62. A substrate coated with a coating layer comprising the two-component coating mixture provided by the process according to Claim 4.

63. A substrate coated with a coating layer comprising the two-component coating mixture provided by the process according to Claim 5.

64. A substrate coated with a coating layer comprising the two-component coating mixture provided by the process according to Claim 6.

65. A substrate coated with a coating layer comprising the two-component coating mixture provided by the process according to Claim 7.

66. A substrate coated with a coating layer comprising the two-component coating mixture provided by the process according to Claim 8.

67. A substrate coated with a coating layer comprising the two-component coating mixture provided by the process according to Claim 9.